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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/661,722  
Filing Date: September 12, 2003  
Appellant(s): KOEGLER ET AL.

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Robert C. Sismilich  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed August 1<sup>st</sup>, 2008 appealing from the Office action mailed May 23<sup>rd</sup>, 2008.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The following are the related appeals, interferences, and judicial proceedings known to the examiner which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal:

Application 10/661,753 contains similar subject matter and similar grounds of rejection, and has been appealed by the same attorney and applicant using nearly identical arguments.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

2002/0191517	Honda et al.	12-2002
6,145,368	Klein	11-2000
5,119,363	Satoh et al.	6-1992
5,107,107	Osborne	4-1992
5,670,947	Nagashima	9-1997

### **(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 2, 4, 7, 8, 13, 16, 21, 22, and 24-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Honda (US 2002/0191517) in view of Klein (US 6,145,368), and further in view of Satoh (US 5,119,363).**

The claims are addressed in order of dependency rather than numerical order.

Regarding claim 21:

Honda discloses:

An optical disk drive (Fig. 6), comprising:

a spindle motor to turn an optical disk (Fig. 6: 56);

an OPU to apply an image to a coating within a label region of the optical disk (Fig. 6: 67).

Honda does not disclose:

an encoder configured to track substantially identical disk speed features in a first annular ring at a first radial position on the optical disk in a region distinct from the label region so as to thereby obtain disk speed data, the disk drive further configured to track disk angular orientation features different from the disk speed features in a second annular ring at a second radial position on the optical disk so as to thereby obtain angular orientation data, the second annular ring abutting the first annular ring, the disk angular orientation features different from the disk speed features, and at least some of the disk angular orientation features having the same angular position as at least some of the disk speed features.

However, Honda does disclose tracking the disk speed (paragraph 37) and angular orientation (paragraph 38).

Klein discloses:

an encoder (the encoder is shown in Fig. 1A, but the specific embodiment relied upon is that of Fig. 2) configured to track substantially identical disk speed features in a first annular ring at a first radial position on a disk (Fig. 2: 104) so as to thereby obtain disk speed data (column 1, lines 25-45), the disk drive further configured to track disk angular orientation features different from the disk speed features in a second annular ring at a second radial position on the optical disk (Fig. 2: 102) so as to thereby obtain angular orientation data (column 1, lines 24-45), the disk angular orientation features different from the disk speed features (apparent from Fig. 2), and at least some of the disk angular orientation features having the same angular position as at least some of the disk speed features (apparent from Fig. 2).

It would have been obvious to one of ordinary skill in the art to include in Honda an encoder configured to track substantially identical disk speed features in a first annular ring at a first radial position on the optical disk in a region distinct from the label region so as to thereby obtain disk speed data, the disk drive further configured to track disk angular orientation features different from the disk speed features in a second annular ring at a second radial position on the optical disk so as to thereby obtain angular orientation data, the disk angular orientation features different from the disk speed features, and at least some of the disk angular orientation features having the same angular position as at least some of the disk speed features.

The motivation would be to measure the disk speed and angle directly from the disk itself, improving measurement accuracy.

Honda in view of Klein does not disclose:

(A) "the second annular ring abutting the first annular ring."

(B) "the annular rings proximate a central hub of the disk"

Regarding (A):

It would have been obvious to one of ordinary skill in the art to include in Honda in view of Klein wherein the second annular ring abuts the first annular ring.

The rationale is as follows:

Whether the first annular ring abuts the second annular ring makes no difference to its purpose: the speed and angular tracking works no better or worse whether the rings abut or not.

Furthermore, the applicant's specification, as originally filed, does not disclose any benefit or reason to have the rings abut one another. Applicant merely discloses embodiments where they abut (as per Fig. 1) and other embodiments where they do not (as per Fig. 2).

It has been held (see, e.g., *In re Japikse*, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950)) that shifting the position of a part is obvious when it does not modify the operation of the invention. Therefore shifting the position of the annular rings of Honda in view of Klein so that they abut would have been obvious to one of ordinary skill at the time of the invention.

The motivation to abut the rings could have been aesthetic (one of ordinary skill might believe adjacent rings are more visually appealing), or to maximize space on the disc (two abutting rings consume less space than two rings spaced apart).

Regarding (B):

Satoh discloses wherein an annular ring used to track disc speed data and disc angular orientation data is proximate a central hub of the disk (Fig. 8; column 6, lines 2-25).

It would have been obvious to one of ordinary skill in the art at the time of the invention to include in Honda in view of Klein where the annular rings are proximate a central hub of the disk.

The rationale is as follows:

Honda in view of Klein discloses the rings; Satoh shows putting rings proximate the central hub is a known technique; and one of ordinary skill could have combined these two teachings together with predictable results.

Regarding claim 2:

In Honda in view of Klein, and further in view of Satoh, the encoder is additionally configured to track the disk angular orientation features, the disk angular orientation features molded within the region distinct from the label region (the two light emitting and light receiving devices taught by Klein Fig. 1 together constitute "the encoder").

Regarding claim 4:

Honda in view of Klein, and further in view of Satoh, discloses a control procedure to coordinate disk speed data from the encoder with the OPU during application of the image (Honda discloses coordinating the disk speed signal with the optical pickup in paragraph 37).

Regarding claim 24:

Honda in view of Klein, and further in view of Satoh, does not disclose "wherein the first radial position is nearer the central hub of the disk than the second radial position."

It would have been obvious to one of ordinary skill in the art at the time of the invention to include in Honda in view of Klein, and further in view of Satoh, wherein the first radial position is nearer the central hub of the disk than the second radial position.

The rationale is as follows:



Which of the two annular rings is closer to the central hub of the disk makes no difference to its purpose: the speed and angular tracking work no better or worse no matter which ring is inside or outside.

Furthermore, the applicant's specification, as originally filed, does not disclose any benefit or reason to have one ring inside the other.

It has been held (see, e.g., *In re Japikse*, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950)) that shifting the position of a part is obvious when it does not modify the operation of the invention.

In this case there are only two possibilities: the first radial position is inside the second, or the second radial position is inside the first. With only two combinations, both solutions would have been obvious to one of ordinary skill in the art, and one of ordinary skill could have pursued the solution wherein one ring is inside the other with a reasonable expectation of success.

Therefore shifting the position of the annular rings of Honda in view of Klein, and further in view of Satoh, so that the first radial position is nearer the central hub of the disk than the second radial position, would have been obvious.

Regarding claim 27:

Honda in view of Klein, and further in view of Satoh, discloses wherein the location of the annular rings on the optical disk maximizes the size of a continuous area of the label region (since the rings abut, as discussed above, and are proximate the central ring of the disc, as discussed above, the continuous area of the label region is maximized).

Regarding claim 28:

Honda in view of Klein, and further in view of Satoh, discloses wherein the label region has a ring shape that extends from an inner radial position to an outer radial position, and wherein at least one of the first and second radial positions is closer than the inner radial position to the central hub (originally in Honda the label region was the entirety of the disc: since the added rings abut and are proximate the central ring of the disc, as discussed above, the remaining label region is this shape).

Regarding claim 33:

Honda in view of Klein, and further in view of Satoh, discloses wherein the label region has a ring shape that extends from an inner radial position to an outer radial position, and wherein the first and second radial positions are closer than the inner radial position to the central hub (originally in Honda the label region was the entirety of the disc: since the added rings abut and are proximate the central ring of the disc, as discussed above, the remaining label region is a ring and the first and second positions must be inside it).

Regarding claims 22, 25, 29, and 30:

These claims are similar to earlier claims except that they are claims to a processor-readable medium. Honda discloses a processor-readable medium (required by the system controller and/or host computer of Fig. 6). All other elements of these claims have already been identified in earlier rejections.

Regarding claim 7:

This claim is similar to claim 2 and similarly rejected.

Regarding claim 8:

In Honda in view of Klein, and further in view of Satoh, the controlling comprises instructions for processing the disk speed data to determine times when the speed of the spindle motor should be increased and times when the speed of the spindle motor should be decreased to maintain desired speed (Honda paragraph 37: "a spindle servo circuit controls...the spindle motor so as to rotate constantly at a rotating speed").

Regarding claims 13, 16, 26, 31 and 32:

All elements positively recited have already been identified with respect to earlier claims. No further elaboration is necessary.

**Claims 3, 6, 9, 11, 12, 14, 15, 17, 19, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Honda in view of Klein, and further in view of Satoh, as applied to claim 21 above, and further in view of Osborne (US 5,107,107).**

Regarding claim 3:

Honda in view of Klein, and further in view of Satoh, discloses an optical disk drive as discussed above.

Honda in view of Klein, and further in view of Satoh, does not disclose wherein the OPU is additionally configured to track the disk angular orientation features, the disk angular orientation features defined within the label region.

In Honda in view of Klein, and further in view of Satoh, light from an encoder passes through slits in a disk and is measured on the other side. This is a transmissive scheme.

Osborne discloses that a reflective scheme may be used in place of a transmissive scheme (column 6, lines 1-10). Osborne discloses that an encoder may still be used with this scheme, but that the light source of an optical disk drive (an OPU) is superior (column 11, lines 25-60).

Therefore it would be obvious to one of ordinary skill in the art to include in Honda in view of Klein, and further in view of Satoh, wherein the OPU is additionally configured to track the disk angular orientation features, the disk angular orientation features defined within the label region.

The motivation would be to use the OPU to track the disk angular orientation features instead of a conventional encoder: Osborne discloses that using an OPU overcomes the weaknesses of a conventional encoder.

Regarding claim 6:

This is similar to claim 3 and is similarly rejected.

Regarding claim 9:

In Honda in view of Klein, and further in view of Satoh, and further in view of Osborne, the interpreting comprises instructions for distinguishing between a first and a second signal received from the encoder, wherein the first and second signal result from differences in light reflection correspond to the presence or absence of the disk speed features (taught by Klein, with the additional teaching of Osborne, as discussed above).

Regarding claim 11:

In Honda in view of Klein, and further in view of Satoh, and further in view of Osborne, the interpreting comprises instructions for:

distinguishing between a first and a second signal received from the encoder, wherein the first signal results when light is reflected off a mirrored surface (taught by Osborne column 6 lines 1-10).

Honda in view of Klein, and further in view of Osborne, does not disclose wherein "the second signal results when light is reflected by a substantially circular molded pit that also deflects a portion of the light away from the sensor."

However, Osborne discloses that in an optical disc information can be indicated through a substantially circular molded pit that also deflects a portion of the light away from the sensor (column 8, lines 35-50).

It would have been obvious to one of ordinary skill in the art to include in Honda in view of Klein, and further in view of Satoh, and further in view of Osborne, wherein the second signal results when light is reflected by a substantially circular molded pit that also deflects a portion of the light away from the sensor, as further taught by Osborne.

The rationale is as follows:

Using substantially circular molded pits to indicate information by monitoring a reflected light signal is the fundamental premise of all optical recording media, as disclosed by Osborne. Therefore one of ordinary skill in the art could certainly have created substantially circularly molded pits to create the signal required by Honda in view of Klein, , and further in view of Satoh, and further in view of Osborne, with predictable results.

Regarding claim 12:

In Honda in view of Klein, and further in view of Satoh, and further in view of Osborne, the interpreting comprises instructions for:

distinguishing between the output signals, wherein the output signal are associated with levels of light reflectivity (taught by Osborne as discussed above) within a region defined on a mirror surface (it must be mirrored if it is reflective) adjacent to the coating on the label side of the disk (the entire operation takes place on the label side of the disc as taught by Honda).

Regarding claim 14:

Honda in view of Klein, and further in view of Satoh, and further in view of Osborne, discloses an optical disk drive as discussed above.

Honda in view of Klein, and further in view of Osborne discloses means for tracking, with an OPU, disk angular orientation data defined by disk angular orientation features; and

Honda in view of Klein, and further in view of Osborne, does not disclose means for passing the disk angular orientation data to the means for labeling to create an image having a desired angular orientation on a coating on the optical disk.

It would have been obvious to one of ordinary skill in the art to include in Honda in view of Klein, and further in view of Osborne, means for passing the disk angular orientation data to the means for labeling to create an image having a desired angular orientation on a coating on the optical disk (already implied by Honda paragraph 38).

The motivation would have been to print an image having a desired orientation to a reference position (this motivation is already present in Honda paragraph 38, but Honda itself did not disclose means to accomplish it).

Regarding claim 15:

Honda in view of Klein, and further in view of Satoh, and further in view of Osborne, discloses wherein the disk angular orientation features are molded features (Osborne column 6 lines 1-30) located radially inside an area on the optical disk reachable by an OPU, to produce the disk angular orientation data (taught by Osborne as discussed above).

Regarding claims 17, 19, and 20:

All elements positively recited have already been identified with respect to earlier rejections. No further elaboration is necessary.

**Claims 10 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Honda in view of Klein, and further in view of Satoh, and further in view of Osborne as applied to claim 3 above, and further in view of Nagashima (US 5,670,947).**

Regarding claim 10:

Honda in view of Klein, and further in view of Satoh, and further in view of Osborne, discloses a processor-readable medium as discussed above.

In Honda in view of Klein, and further in view of Satoh, and further in view of Osborne, the interpreting comprises instructions for:

distinguishing between a first and a second signal received from the encoder, wherein the first signal results when light is reflected off a mirrored surface to a sensor (taught by Osborne as discussed above).

Honda in view of Klein, and further in view of Satoh, and further in view of Osborne, does not disclose wherein "the second signal results when light is reflected by a saw tooth feature that also deflects a portion of the light away from the sensor."

However, Osborne does teach that one surface should reflect light back to the sensor and the other should not (column 6, lines 5-50).

Nagashima discloses a saw tooth feature that deflects a portion of light away from a sensor (column 3, lines 29-40).

It would have been obvious to one of ordinary skill in the art at the time of the invention to include in Honda in view of Klein, and further in view of Satoh, and further in view of Osborne, wherein the second signal results when light is reflected by a saw tooth feature that also deflects a portion of the light away from the sensor.

The rationale is as follows:

Osborne discloses detecting the presence of absence of a reflected signal with a sensor. Nagashima discloses a method of deflected a reflected signal so that a sensor does not detect. One of ordinary skill could have combined these two elements together with predictable results.

Regarding claim 18:

All elements positively recited have already been identified with respect to earlier rejections. No further elaboration is necessary.



**(10) Response to Argument**

Applicant makes numerous arguments in their appeal brief. They are organized into an outline structure with headings, sub-headings, and sub-sub-headings. For convenience and clarity, these arguments will be addressed using the same outline structure presented by Applicant.

Before the specific arguments are addressed, a few general points will be made. Applicant's arguments basically fall into two types: that "improper hindsight" was used, or that the trivial rearrangement of the location of elements would not have been obvious.

In response to Applicant's argument that the Examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

In response to Applicant's arguments regarding the rearrangement of parts, there are only two rings on the disc. Whether these rings are next to one another, or slightly spaced, or whether they are on one side of the disc or another, or whether one is inside another or outside the other has no effect on the operation of the claimed disc drive. Since there are only a limited number of possible arrangements of two circular rings on

a disc, one of ordinary skill could certainly have envisioned all of these possibilities, and implemented any of them with a reasonable expectation of success. As such, they would have been obvious.

Regarding Applicant's specific arguments:

"Claims 2, 4, 7-8, 21-22, 27-30, and 33 were improperly rejected..."

In this section, Applicant argues that the 103 rejection of these claims as unpatentable over Honda in view of Klein and further in view of Satoh is improper.

"1. The cited references...do not teach or suggest all the limitations of...claim 21."

"a) The feature...in which a second annular ring is abutting a first annular ring...is absent from the combined references, and modifies the operation..."

In the rejection of this claim, the Examiner had admitted that the prior art does not disclose wherein the two rings are "abutting," but argued that to move the rings until they abutted was nonetheless obvious because it does not modify the operation of the device.

Applicant's argument is that moving the rings does modify the operation because it changes the size of the continuous, uninterrupted area of the label region.

First, rearranging the rings so that they abut does not modify the operation of the claimed disc drive. The rings are used for speed and/or rotation control, and they work exactly the same whether they abut or not. Moving them does not improve the speed or rotating tracking or change how it works in any way: they function exactly the same way in either case.

Second, whether the label region is uninterrupted or not is not an engineering choice, but rather an aesthetic one. Since the rings function exactly the same way whether or not they abut, from an engineering standpoint there is no difference between the two. Whether there is an interruption in the continuous area is instead an aesthetic choice, and as such is not a patentable difference.

This argument is supported by Applicant's own disclosure: Applicant discloses embodiments where the rings abut (Fig. 1) and embodiments where they do not (Fig. 2), with no disclosure or evidence that one is superior to the other.

To create an analogy: if someone had patented a disc with a dividing line drawn on it, would a disc where that line is shifted to one side or the other be patentable over it? That is the only difference between Applicant's disclosure and the prior art: that a line on the disc has been moved to a different place. Otherwise they work identically.

Third, the advantage Applicant recites (having a larger continuous area) would itself have been obvious to one of ordinary skill at the time of the invention, and in and of itself provides further motivation for modifying the prior art in the manner suggested by the Examiner. Applicant cannot seriously be contending that it never would have occurred to anyone to put two things closer together before their disclosure.

"2. The cited reference does not teach or suggest all the limitations of Appellants' independent claim 22..."

Here Applicant merely argues that claim 22 is allowable for the same reasons as claim 21. Since those reasons were not found persuasive, this argument has not been either.

"3. The Examiner used impermissible hindsight to combine the Honda, Klein, and Satoh references."

"a. The Klein reference is non-analogous art..."

Here Applicant argues that because Klein is directed to a rotary encoder rather than an optical disk drive it is "non-analogous" art.

However, Klein is directed to tracking the speed and/or angle of a rotating disc. An optical disc drive contains a rotating disc, and Honda discloses that the speed and angle need to be tracked. Therefore even though Klein is not specifically directed to optical disc drives, it is directly on-topic for the problem at hand: tracking the speed and angle of the rotating disc of Honda. As such it is "reasonably pertinent to the specific problem with which the inventor was involved."

"b. Because the Examiner has not provided any evidence that resolves or specifically defines the level of ordinary skill in the pertinent art, any assertion as to what would be obvious to a person having ordinary skill in the art is improper."

Although it was never explicitly stated, the level of ordinary skill has been implicitly defined through the rejections made. The contention is that one of ordinary skill in the field of optical disc drives, who undoubtedly has advanced degrees and/or experience in engineering and/or optics, is capable of understanding that markings used to track the speed and angle of one disc could be used in an identical fashion on another disc. If Applicant disagrees with this assertion they are welcome to submit evidence that one of ordinary skill would not find this obvious.

In this section, Applicant also argues that the rejection is "riddled with hindsight" because only one teaching of Satoh was used in the rejection. Satoh is only relied upon to show that the tracking features could be on the inside rather than the outside of the disc: although this feature is probably in and of itself obvious, Satoh was relied upon to show that it had specifically been done before. Just because only this one teaching of Satoh was used does not mean that the rejection is "riddled with hindsight," it merely means one of ordinary skill would have known this teaching and used it.

"4. The Honda, Klein, and Satoh references are not properly combinable in that the combination would result in an inoperative device..."

Here Applicant argues if the rings of Klein were moved to the inner circumference of Klein, Klein would become inoperable. In other words, if the teaching of Satoh were applied to Klein, Klein wouldn't work.

This argument is irrelevant. The question should not be whether Klein would be rendered inoperable by the teaching of Satoh, but whether Honda in view of Klein would be rendered inoperable. The rejection is not Klein in view of Satoh but Honda in view of Klein and further in view of Satoh.

Applicant's argument is that the disc of Klein is so small that if the rings were moved to the inner circumference, it wouldn't work. However, the disc of Honda in view of Klein is the disc disclosed by Honda. This disc is exactly the same size as the one disclosed by applicant: e.g., a CD or DVD. Therefore if the rings of Klein were put on the disc of Honda, as per the rejection, they could be moved anywhere on the disc and still function.

Applicant argues that it is improper hindsight to ignore the size of Klein's disc, but this argument makes no sense. Klein has been relied upon only to teach a pattern used for tracking the speed and/or angle of the disc. The disc in question remains the disc of Honda. It would make no sense at all to incorporate the size of Klein's disc into Honda because then the disc would no longer function as a CD or DVD.

Applicant makes a second argument in this section. Applicant argues that Satoh "teaches away" from the combination because Satoh discloses groove-like tracks used for reading and writing data from the disc.

Again, Satoh has only been relied upon to teach one very simple element: that markings used for speed and/or angle tracking can be aligned around the inner circumference of the disc. This element is so obvious it hardly even requires Satoh. The rest of Satoh is completely irrelevant to the combination relied upon, and Applicant's arguments here do not have anything to do with the teaching relied upon.

It is not "impermissible hindsight" to rely on only one teaching from a reference. Any combination of references necessarily includes only those elements from the reference that are relevant to the problem at hand. It would be impossible to construct any 103 rejection if every element from every reference had to be used in the combination.

"B. Claims 13, 16, and 31-32 were improperly rejected as being unpatentable over Honda...in view of Klein...and further in view of...Satoh."

"1. The cited references, in combination, do not teach or suggest all the limitations of Appellants' independent claim 13."

"a) The tracking means...in which a second annular ring abuts a first annular ring...is absent"

This section merely repeats the arguments made earlier regarding the abutting rings and their proximity to the center. These arguments are no more persuasive here.

"b) Tracking means of the disc drive for tracking disk angular orientation features with an OPU is absent from the combined references."

The term OPU is not defined in the claim but presumably stands for "optical pickup." The encoder disclosed by Klein can be considered "an optical pickup" in that it uses light and photodetectors – i.e., optics – to determine the speed and/or angle.

Here Applicant has probably assumed that "OPU" must mean the pickup used to read and/or write information from the disc, but the claim does not define any purpose for the OPU other than tracking the angular orientation features. Therefore the encoder of Klein can reasonably be considered "an OPU" and therefore meets the claim language.

Note that some of the other claims do recite more details about the OPU that forbid it from being interpreted in this manner and for this reason Osborne has been used to reject those claims. That will be addressed later.

"2. The Examiner utilized impermissible hindsight..."

"3. The Honda, Klein, and Satoh references are not properly combinable..."

These are a repeat of the previous arguments and have already been discussed above.

"C. Claims 24-25 were improperly rejected..."

"1. The rejection of dependent claim 24 is improper..."

This is a repeat of the previous argument and has already been discussed above.

"2. The cited references, alone or in combination, do not teach or suggest all the limitations of Appellants' dependent claim 24."

"a) The feature that a first radial position (for the ring of disk speed features) is nearer the central hub of the disk than a second radial position (for the ring of disk angular orientation features) is absent from the combined references, and modifies the operation of the invention."

Here the Examiner had argued that which ring is inside the other makes no difference in the operation of the invention.

Applicant argues that it would modify the operation because it changes which elements of the disk drive read the disk speed and which read the disk angular orientation features.

This argument might be compelling if the claim in question recited which elements of the drive read the disk angular orientation features. However, it does not. Applicant cannot argue that the rejection would modify the operation of a part of the invention that is not even claimed.

In Honda in view of Klein, and further in view of Satoh, the features are read by encoders, and whether one ring is inside the other or vice versa makes no difference. Therefore switching the position of the two rings would not modify the operation of Honda in view of Klein, and further in view of Satoh, in any way.



Also, the Examiner had argued that since there are only two possibilities (one inside the other or vice versa) both arrangements would immediately be obvious to one of ordinary skill. In their arguments, Applicants has presented several other possible combinations of rings. In response to this, first, Applicant still has not presented so many possibilities that one of ordinary skill couldn't have conceived of all of them, and second, Applicant's proposals ignore the teaching of Klein, which proposes two rings rather than combined rings, partial rings, and all the other arrangements Applicant has thrown about. When the teaching of Klein is applied to Honda, there are only two circular rings, and one has to be inside the other or vice versa.

"The cited reference does not teach or suggest all the limitations of Appellants' dependent claim 25..."

This is a repeat of earlier arguments and is not persuasive for similar reasons.

"D. Claim 26 was improperly rejected..."

"1. The rejection of dependent claim 26 is improper for the same reasons that render the rejection of its base claim 13 improper."

"2. The cited references...do not teach or suggest all of the limitations of Appellants' dependent claim 26"

"E. Claims 9 and 11-12 were improperly rejected..."

"1. the rejection of dependent claims 9 and 11-12 is improper for the same reasons that render the rejection of their base claim improper."

"F. Claims 13 and 19-20 were improperly rejected..."

"1....for the same reasons that render the rejection of base claim 13 improper."

"G. Claims 3 and 6 were improperly rejected..."

"1....for the same reasons...21 and 22 [are] improper."

All of these sections are repeats of earlier arguments and are not persuasive for similar reasons.

"2. The cited references...do not teach all the limitations of Appellants' dependent claim 3."

"a) The feature wherein the OPU is configured to track the disk angular orientation features, while the encoder is configured to track the disk speed features, is absent from the combined references."

Here Applicant argues that Osborne doesn't disclose a disc drive that uses an encoder to read one ring of features and an OPU to read another.

Nonetheless such a drive would have been obvious given Osborne.

Honda in view of Klein, and further in view of Satoh, discloses a disc drive that uses encoders to track both rings of features. Osborne discloses that an optical pickup of the type used in disc drives can do everything an encoder can do, but better. Therefore, given the teaching of Osborne it's definitely obvious to replace an encoder with an optical pickup.

In this section, Applicant makes two arguments against this combination. The first is that if the pickup were used to read the disc orientation features, the head would have to move away in order to write and would lose its view of the track on the disc. Thus it would no longer be "actively self-aligning."

The actively self-aligning property is not required for the combination of Honda, Klein, Satoh, and Osborne to function. This feature of Osborne was not relied upon in the 103 rejection and is not necessary to provide motivation for the combination (in column 11, lines 25-60 Osborne discloses multiple reasons why a pickup is better). Just because Osborne discloses features that are not present in the combination does not make the combination any less obvious.

Applicant's second argument is that Osborne doesn't disclose that an encoder can be used for one set of features and an optical pick-up for another set.

Nonetheless, Osborne discloses that both encoders and pickups can be used for the same purpose. Therefore it would be no difficulty for one of ordinary skill in the art to envision using two encoders, two pickups, or one of each. There's only a limited number of possibilities, so one of ordinary skill could have envisioned all of them and used any of them with predictable results.

"3. The cited references...do not teach or suggest all the limitations of Appellants' dependent claim 6..."

This is a repeat of earlier arguments and is not persuasive for the reasons discussed above.

"4. The Honda, Klein, Satoh, and Osborne references are not properly combinable in that there is no articulated reason with some rational underpinning to modify or combine the reference teachings..."

Here Applicant is specifically arguing with the motivation for combining the teaching of Osborne with the earlier references. Since Osborne discloses several

reasons why an optical pickup is better than a conventional encoder, this argument appears to be without merit.

"5. ...the Osborne references teaches away from the combination of features..."

Here Applicant admits that Osborne does disclose a pickup is better than an encoder, but argues that Osborne would then teach that a pickup should be used for both rings of features rather than just one.

However, since the base reference (Honda, Klein, and Satoh) teaches using an encoder for both rings of features, it definitely would be obvious to one of ordinary skill that an encoder could be used for either one. Even if it would also be obvious, given Osborne, to replace both encoders with pickups it is equally obvious to replace just one of them: even replacing one would still provide an improvement over the base reference, and so there is still motivation to do it.

Also, since the optical pickup of Honda, Klein, Satoh, and Osborne is also used to write the label to the disc, there are obvious reasons not to use the pickup to track every ring: having one pickup track two rings and write to the disc might be more than it can handle. One of ordinary skill would have been more than capable of judging the limitations of the pickup and using an encoder for the extra ring if necessary.

"6. There would be no reasonable expectation of success...in that the OPU would be inoperative either to read the second annular ring of features on the optical disk or to mark the writable material in the label region of the optical disk"

Here Applicant again argues that Osborne discloses the pickup is "actively self-aligning" and that a self-aligning pickup cannot maintain its position over the track and simultaneously write the label.

Again, this self-aligning nature of Osborne is not present in Honda, Klein, Satoh, and Osborne. Applicant is arguing a feature of Osborne individually that is not present in the combination, and therefore not relevant to the rejection.

If the pickup is not self-aligning, the combination would work perfectly. This is evidenced by the fact that it is essentially identical to Applicant's disclosed invention.

"H. Claim 1 was improperly rejected..."

"1. The rejection of dependent claim 17 is improper for the same reasons..."

"2. The cited references...do not teach or suggest all the limitations of Appellants' dependent claim 17"

"3. ...there is not articulated reason with some rational underpinning..."

"4. ...Osborne teaches away from the combination..."

"5. There would be no reasonable expectation of success..."

"I. Claim 10 was improperly rejected..."

"1. The rejection of dependent claim 10 is improper for the same reasons..."

"J. Claim 18 was improperly rejected..."

"1. The rejection of dependent claim 18 is improper for the same reasons..."

All of these arguments are repeats of arguments applied to other claims, and are not persuasive for similar reasons.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

CRL 9/5/08

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